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NOTES ON BAPTISIA, by Wm. M. Canby.—Under the generic names of *Crotalaria* or *Sophora*, Linnæus described four genuine species of *Baptisia*, viz: *B. perfoliata*, *B. alba*, *B. tinctoria* and *B. australis*. In 1788, Walter added two more, *B. lanceolata* and *B. villosa*, placing them doubtfully under *Sophora*. Michaux (1803) placed all under *Podalyria*, and gave the same number (six) if we exclude his *P. mollis* which is now well known as a *Thermopsis*. Pursh merely copied Michaux's account of the species. Nuttall in his "Genera" published in 1818 added *B. leucophæa*, properly placing all under *Baptisia*. He continued Michaux's species as *B. mollis*, as did also DeCandolle in 1825 and Torrey and Gray, doubtfully, in 1838–40. DeCandolle added no new species, Muhlenberg's *B. bracteata* being the same as *B leucophæa*, Nuttall; but between his account of the species and that of Torrey and Gray, Nuttall had added his *B. microphylla* and *B. sphærocarpa* and Croom his *B. simplicifolia*, thus bringing the number up to ten. Torrey and Gray elaborated the genus well, clearing up some doubtful cases and adding two species of their own, *B. leucantha* and *B. Lecontii*, and one of Chapman's, *B. megacarpa*. The number was increased to fourteen by the *B. Serenæ* of Curtis, although this may yet prove to be a hybrid between *B. alba* and *B. tinctoria*; and as it is evident from a comparison of original specimens, that Mr. Watson is right in considering Ravenel's *B. stipulacea* as identical with *B. microphylla*, this number continued to represent the species, until, in the GAZETTE for August last, *B. sulphurea* was added by Dr. Engelmann and *B. calycosa* by myself, completing the list as given below.

The earliest arrangement of the species was by dividing them into the obvious groups of simple leaved and trifoliate leaved species. As the number of the latter increased the color of the flowers was brought into service to form sub-divisions. This did pretty well when the known species were fewer and the legumes of several had not been collected; but now that new species have increased and old ones have become better known it seems best to try if they cannot be more naturally grouped. The synopsis given below is the result of some study of the larger collections in this country supplemented

by the favors of esteemed correspondents. But as it is quite astonishing how rarely the legumes are found in our herbaria, an alternative arrangement based upon the color of the flowers is given for the last nine species. But this I do not regard with favor.

It is evidently natural and even necessary to retain the primary divisions of simple leaved and trifoliate leaved species, but to these I have added another for *B. microphylla*, Nutt., which is intermediate in character. In the TRIFOLIATÆ it is more convenient to form the principal divisions by bringing together species having bibracteolate pedicels as distinguished from those without them; and again to separate the latter into those species whose inflorescence is terminal and sometimes leafy, and those in which the racemes are pedicellate and opposite the leaves—a distinction which seems to me to be not only useful but of some importance; and the latter again by means of the legumes. This arrangement brings the allied species together better than any other that I could think of. If space permitted, the alliances of some of the species would present interesting features; but I will only add that specimens from the South and South-west will still be gratefully received and may serve to illustrate some doubtful forms.

BAPTISIA, Vent.

§ SIMPLICIFOLIÆ. Leaves all simple; no stipules (stipules and leaflets united).

1. *B. simplicifolia*, Croom. Leaves sessile or nearly so; flowers in racemes. Quincy, Florida.

2. *B. perfoliata*, R. Brown. Leaves perfoliate; flowers axillary. South Carolina and Georgia.

   var. *lobata*. Leaves variously sinuate or lobed or even almost trifoliate. South Carolina. (Ravenel.)

§§ STIPULATÆ. Leaves mostly trifoliate, but some of the upper leaflets and even the conspicuous stipules either suppressed or united together, thus appearing simple and sessile. Flowers in short loose terminal racemes.

3. *B. microphylla*, Nuttall. (*B. stipulacea*, Ravenel. I cannot but regret the necessity for the suppression of Ravenel's excellent name.) South Carolina and West Florida to Alabama.

   var. *axillaris*. Flowers axillary from the upper leaflets. Probably a hybrid. Aiken, South Carolina. (Ravenel.)

§§§ TRIFOLIATÆ. Leaves petioled, all trifoliate; flowers in racemes.

* Pedicels slender, bibracteolate above the middle; stipules, bracts and bracteoles persistent.

4. *B. Lecontii*, Torr. and Gray. Pubescent; calyx lobes short triangular. Georgia and Florida.

5. *B. calycosa*, Canby. Glabrous (except the somewhat ciliate foliage, &c.), calyx lobes foliaceous, almost as long as the corolla, persistent and enlarging in fruit. Legumes compressed, ovate, acuminate, about the length of, or shorter than the calyx. East Florida. (Miss Reynolds, Miss Floyd.) A very remarkable species.

** Pedicels not bibracteolate.

+ Racemes very many, short and loose, terminal, often leafy at base, *i. e.*, some of the lower flowers axillary.

6. *B. tinctoria*, R. Brown. Very smooth with small (½ in. to 1½ in. long) wedge obovate leaflets and small bright yellow flowers. Canada to Florida and west to the Mississippi.

7. *B. lanceolata*, Elliott. Stout, pubescent when young, leaflets oblanceolate (2 to 3 in. long); flowers large, dull yellow. North Carolina to Florida and westward.

var. *uniflora*, Torr. and Gray. (*B. uniflora*, Spreng.) Leaflets more cuneate obovate, firmer in texture, often retuse; flowers nearly all axillary. Arkansas.

+ + Racemes fewer, opposite the leaves, the flowers therefore never axillary.

++ Legume spherical, its walls very thick and bony.

8. *B. sphærocarpa*, Nuttall. Arkansas and Texas.

++++ Legumes oblong, the walls thin but firm.

= Legumes flattened contrary to the septa.

9. *B. alba*, R. Brown. Legumes six to eight times longer than broad; flowers white. North Carolina to Florida and westward.

10. *B. Serenæ*, M. A. Curtis. Legumes one half shorter; flowers bright yellow. Sand hills, South Carolina.

=== Legumes much inflated, blunt, nearly cylindrical.

11. *B. megacarpa*, Chapm. Racemes short, somewhat numerous, sometimes appearing as if terminal; flowers bright yellow; leaflets of the long petioled leaves elliptical. Florida and Georgia.

12. *B. leucantha*, Torr. and Gray. Racemes few, very long; flowers nearly white; leaves short petioled with oblanceolate leaflets; stipules deciduous; style short, about as long as the linear acute ovary. Upper Canada to Michigan and thence to South Carolina and Florida and westward.

13. *B. sulphurea*, Engelm. Nearly as in the last but with shorter racemes, persistent stipules and yellow flowers which have an obtuse ovary with longer style. Arkansas.

===== Legumes boat shaped, abruptly and sharply acuminate.

14. *B. villosa*, Nuttall. Racemes somewhat declining or erect; flowers yellow, short pedicelled; legumes little inflated, obtuse at base. Virginia, North Carolina and Arkansas.

15. *B. leucophæa*, Nuttall. Racemes strongly declined; flowers cream-colored, on long pedicels subtended by large persistent bracts; legumes much inflated, strongly acuminate at each end. Michigan, south to Texas and east to South Carolina.

var. *lævicaulis*, Gray. Smaller in all its parts and nearly smooth. Texas.

16. *B. australis*, R. Brown. Smooth; racemes many or several, erect; flowers blue or sometimes chocolate-colored with the vexillum sometimes auriculate; legumes erect, long and little inflated. Pennsylvania and Ohio to Georgia and Arkansas.

var. *minor*, Torr. and Gray. "Flowers smaller and fewer; vexillum not auriculate." Arkansas.

For the last nine species this arrangement may be preferred by some:

= Flowers yellow.
8. *B. Serenæ*, M. A. Curtis.
9. *B. megacarpa*, Chapm.
10. *B. sphærocarpa*, Nutt.
11. *B. sulphurea*, Engelm.
12. *B. villosa*, Nutt.

== Flowers white or cream-color.
13. *B. leucophæa*, Nutt.
var. *lævicaulis*, Gray
14. *B. leucantha*, Torr. and Gray.
15. *B. alba*, R. Brown.

=== Flowers blue.
16. *B. australis*, R. Brown.
var. *minor*, Torr. and Gray.

A Visit to the Shell Islands of Florida, by A. H. Curtiss.—Paper II.—Taking up the thread of our narrative where lately it was dropped, we find ourselves at the entrance of the channel which, through "wide-spread, reedy fens," leads to the Island of Pines. The tide is beginning to run out, and warns us to hasten or remain stranded somewhere in the morass till midnight. Rowing is impossible, but by pushing and paddling, we manage to get along very well through the broader reaches of the watery alley. All goes well for a while, but presently the creek forks and we know not which way to turn. The left-hand course appears more navigable, and soon we are toiling through a ditch which becomes narrower as we progress. It winds to the right and then to the left, and folds upon itself like a writhing